TOMB OF THE CARDINAL SFORZA, ROME.—DETAILS.

*Fig. 2.*

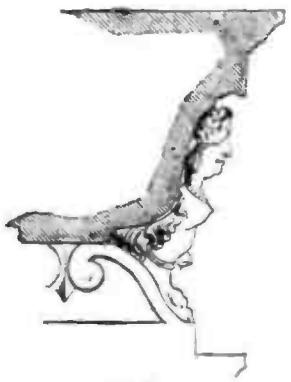

*Fig. 3.*

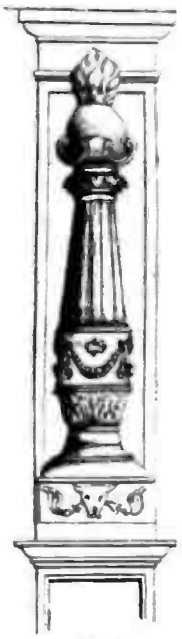

*Fig. 4.*

## TOMB OF THE CARDINAL SFORZA, ROME.

THIS magnificent tomb, constructed in 1507, to the memory of Cardinal Sforza, by Andrè Contucci, surnamed Sansovino, is attached to one of the arcades of the abeis of the Church St. Marie du Temple, in Rome. It is of white marble exquisitely worked, and the correctness of the details, considering the early period of its construction, is very remarkable. The sarcophagus is elevated about 7 ft. from the ground, and upon it is a sculptured representation of the cardinal reposing. The frieze below, in the pedestal of the order, is a *chef-d'œuvre* of elegance.

The columns project three-fourths of their diameter. The total height of the whole to the upper cornice is 17 ft. 6 in., and the width between the centres of the two outer columns is 11 ft. 6 in.

We give a drawing of the capital of one of the columns, one-fourth the full size (fig. 2); also the section of sarcophagus (fig. 3), and the candelabrum (fig. 4), one-eighth of the real size.

Jacopo Tatti, the architect, better known as *Sansovino*, was the pupil of Contucci, and took his cognomen from that circumstance.

## HARBOURS OF REFUGE.

INSTITUTION OF CIVIL ENGINEERS.

AT a meeting on June 20, Mr. Joshua Field, president, in the chair. The Paper read was "On Harbours of Refuge," by the right hon. the Earl of Lovelace.

It consisted chiefly in a succint review of the Reports of the Commissioners on Shipwrecks and on Harbours of Refuge, giving the opinions of the naval officers and civil engineers on the necessity for harbours in certain situations, the naval qualities possessed by those positions, and the possibility of constructing harbours in them, and the nature of the structures. The necessity for harbours on our coasts capable of sheltering fleets from storms in peace, and the enemy during war, appeared to be admitted, particularly at the present moment, when the disturbed state of the continent and the restless character of our near neighbours was considered. It was stated, that of various situations pointed out, that of Dover was the only one yet decided upon, although great works are contemplated at Portland, where from Mr. Rendel's designs a system of construction would be adopted which would be both economical and stable, and at the same time would afford employment to a class of persons whose labour it had been difficult hitherto to use efficiently.

The various projects of floating breakwaters, and other artificial shelter for vessels, were then examined, and were generally condemned as entirely inefficient for the objects proposed. The next question was the plan of the harbour and the mode of construction of the works. After quoting all the authorities on both sides, including the naval officers, the commissioners, the civil engineers, and the scientific writers, the preference was given to a large harbour with two entrances, so placed as to allow a sufficient run of the tide through it, to prevent any very considerable deposit of silt, but so constructed as to afford shelter to the vessels within. The pier walls inclosing the harbour to be built vertically up from the bottom, or with a very slight inclination in their height, instead of throwing in masses of rubble stone to find its own angle of repose, which it was shewn was not less than four or five to one, and that it only attained solidity after a lapse of many years, even with a due admixture of small materials to fill up the interstices, and after constant supplies of stone to replace that which the sea removed. The reports of Captain Washington were quoted to prove the failures that had occurred at certain harbours in Ireland, where it was stated that the long slopes had been destroyed by the sea, and had ruined the harbours they were intended to protect. The proceedings at Cherbourg and Plymouth were followed in great detail, with a view to deducing arguments against the long slopes and in favour of vertical sea walls. The protest by Sir Howard Douglas in favour of long slopes, was examined at great length, and the arguments used on both sides were analyzed with skill and candour.

Colonel Emy's theory of the effects of the "flot du fond," was carefully examined, and, without going to the entire length that he did, it was admitted that in many cases the effects produced were as he described them, and that the subject, as he had brought it forward, was well worthy the attention of civil engineers. The placing a vertical wall upon a substratum of rubble in the form of a long slope, was shewn to be pregnant with mischief, and had never been successful, and the adoption of that system at Cherbourg had been a matter of necessity rather than of choice.

Mr. Alan Stevenson's clever experiments on the force of waves striking opposing bodies were given, and it was urged that the force shewn to be developed by a breaking wave would not act upon a vertical wall, up and down which it would merely oscillate, whereas it might fall with all its accumulated force upon a slope upon which it would naturally break. In conclusion, it was urged that, although for Dover, which was the spot whereon to mount guard over the Channel, in order not only to prevent invasion, but to maintain our present naval supremacy, it might be permitted to expend a large sum of money; yet it would not do *to have several Dovers*, and therefore it behoved the authorities to consider carefully the site, the plan, and the method of construction, before commencing works in which, in the present state of engineering science, the experience of the past should be used to avoid the errors that had occurred in former and similar works.

For the discussion which ensued, and in which the principal civil engineers engaged on great hydraulic works took part, after justly complimenting the Earl of Lovelace for the very able and impartial analysis he had made of the evidence contained in the Government report, and the documents in his possession, the speakers explained the actual circumstances and conditions of the works which had been instanced as failures, and it was shewn that far from being expensive or useless works, they had been completed within the original estimates; and that wherever the construction had required restoration or additions, it had arisen from the use of defective materials, which being on the spot, it had been obligatory to employ, and not from the use of the long slope, which, as compared to vertical walls in similar situations, was shewn to be more durable, and to have been in many instances successfully exhibited for vertical walls after they had succumbed to the assaults of the raging billows.

## MONUMENTS IN CHURCHES.

ON entering our churches and cemeteries, especially in and around the metropolis, the cultured eye is at once struck with the crude and inharmonious black and grey marble back-grounds, against generally white walls, of the various mural monuments which disfigure, in too many instances, rather than adorn, our houses of prayer, increased by the deplorable neglect, after once fixing, that these matters experience, the fee being only for the permission to fix, and does not, as it ought, include the proper care and cleansing afterwards. Among the various reasons for these strong, or cold, and inharmonious contrasts being so generally used, is no doubt the association these colours have with mourning, their being most easily obtainable in marbles, and that such works have been too much practised as a mere trade, or directed or dictated by tasteless committees, or individuals. In the time of black patches, such contrasts might have been admired, but now that taste in art is advancing, these are not only eyesores, but loudly cry for remedy; and we are called upon,

To learn about OCR and PDF Compression go to our website